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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Michel Monnerat

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

LIU, HARRY K

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,709	Applicant(s) MONNERAT ET AL.	
	Examiner HARRY LIU	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 39-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38, 44-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant requests for acknowledging of foreign priority and confirming receipt of all certified copies of the priority documents.

The reception of foreign priority had been acknowledged in the office action mailed 11-06-2007, however, **no English translation** of the application has been found.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-5, 15-17, 19-21, 35, 37-38, 46-47 and 49 are rejected under 35 U.S.C. 102(a) as being anticipated by Sheynblat (2005/0192024).

Regarding claims 1, 15, Sheynblat discloses a system and method of determining the position of a mobile terminal by use of satellite and **assistance** server (location server, article 140 in FIG. 1below). A satellite positioning system uses pseudo-random codes (PN) by **correlating** received PN and **replica** signal stored in terminal for acquiring satellite signal. Assistance data is transmitted to terminal to help **estimating** position, estimated distances (PR₁, PR₂, and PR₃) and **inherently** provides Doppler effects information. Maximum correlation is selected in order to determine PN codes and demodulate the received signal.

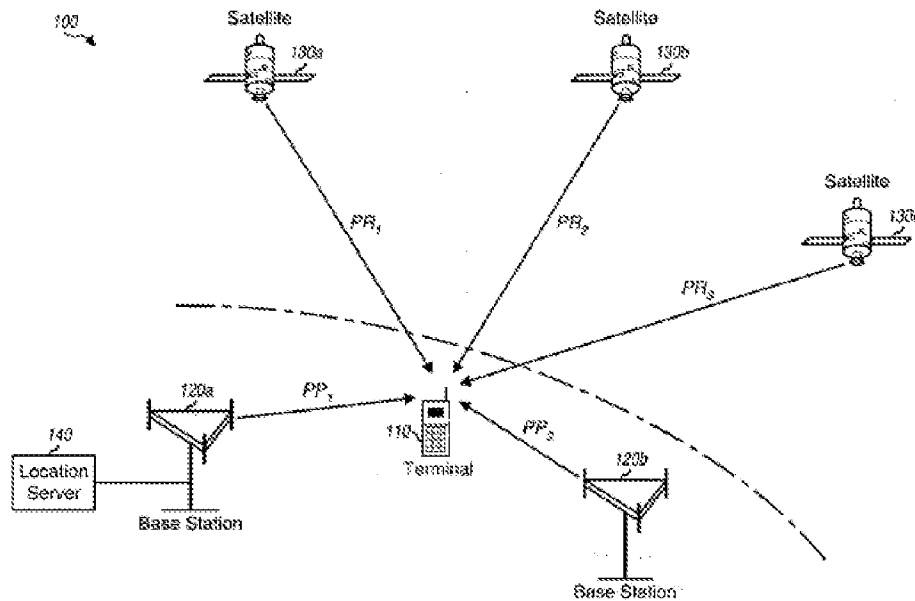


FIG. 1

Regarding claim 2, Sheynblat discloses assistance server (location server) is connected to said terminal via cellular communication network through BTS (base station) (see FIG. 1 above).

Regarding claim 3, Sheynblat discloses assistance data is transmitted to said terminal via cellular communication network (see FIG. 1 above).

Regarding claims 4, 10, 16, Sheynblat discloses approximate position represents the cell in which the terminal is situated when it requests said assistance data (initial position estimate for the terminal is first obtained (e.g., based on a **cell-ID/identifier** or an enhanced cell-ID solution, Abstract & FIG. 5).

Regarding claims 5, 17, Sheynblat discloses the UE is slaved to BTS's timing clock (The signals received from the base stations may be used for timing by the terminal or may be converted to pseudo-ranges, paragraph 0007).

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Regarding claims 7, 19, Sheynblat discloses the assistance data comprises ephemeris (paragraph 0142) and disturbances (errors) by the ionosphere (paragraph 0089).

Regarding claim 9, 20-21, Sheynblat discloses assistance data representing a three dimensional model (paragraph 0039, 0143-0144).

Regarding claim 35, 37-38, 46-47, 49, Sheynblat discloses GPS system which is a multiple-access phase modulated L-band signal and RNSS type.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6, 11-13, 15-16, 18, 23, 36, 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheynblat (2005/0192024).

Regarding claims 1, 15, even if Sheynblat does not inherently disclose Doppler effect information from server. It would have been obvious that location server is designed to help terminal in fast acquisition of satellite by providing in view satellites and ephemeris data.

Regarding claim 2, Sheynblat discloses assistance server (location server) is connected to said terminal via cellular communication network through BTS (base station) (see FIG. 1 above).

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Regarding claim 3, Sheynblat discloses assistance data is transmitted to said terminal via cellular communication network (see FIG. 1 above).

Regarding claims 4, 16, Sheynblat discloses approximate position represent the cell in which the terminal is situated when it requests said assistance data. A cellular device can only communicate and receive assistance data via BTS with its associated cell. No communication can be established between a terminal and a non-serving cell.

Regarding claims 6, 18, Sheynblat does not specifically disclose retaining the highest correlated PN as the acquired PN. However, it is a well known practice in CDMA technology by use of correlator in correlating replica and receiving sequence in finding the PN based on correlated energy.

Regarding claim 11, Sheynblat does not specifically disclose quality of information data transmitted is stored in auxiliary data. However, it is a well known practice in providing health condition of satellites in the assistance data which is a indication of quality of information.

Regarding claims 12-13, Sheynblat, as applied to claims 5, 9, 11 rejection above, disclose all claim limitations.

Regarding claim 23, as best understood by The Examiner, the terminal in cellular system transmits (uplink) to BTS and its power received at the BTS are saved/recorded as its initial/rough position based on the serving cell ID.

Regarding claim 36, Sheynblat, as applied to claim 1 rejection above, does not disclose application in W-CDMA technique but reveals use of A-GPS (paragraph 0004).

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As is known in the positioning art, A-GPS is widely used in W-CDMA. It would have been obvious to adapt the invention to be used in W-CDMA cellular system.

Regarding claims 46-47, Sheynblat discloses GPS system (paragraph 0005) which is RNSS type networks.

5. Claims 8, 22, 26-34, 44-45 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheynblat (2005/0192024) as applied to claim 1 above, and further in view of Jolley (6323803).

Regarding claims 8, 22, Sheynblat, as applied to claim 1 rejection above, discloses all claim limitations except for specifying the assistance data is coming from an augmentation system connected to the satellite navigation system. However, Jolley teaches a system for broadcasting assistance data by use of cellular system (Abstract) and broadcasting assistance information combined with SBAS (col. 5, lines 7-42) with use of DGPS. It would have been obvious to modify Sheynblat with Jolley by incorporating augmentation system in providing assistance information in order to provide more accurate positioning information.

Regarding claim 26, Sheynblat, as applied to claim 1 rejection above, discloses all claim limitations except for specifying the assistance data is transmitted from server to terminal as requested. However, Jolley teaches server (MLC, FIG. 1 and col. 9, lines 15-25) transmits assistance data to terminal when it is first powered up. It would have been obvious to modify Sheynblat with Jolley by incorporating claimed feature in order to provide assistance data to terminal to help finding a position fast especially when the mobile is first powered up.

Regarding claim 27, Sheynblat, as applied to claims 5, 7, 9 and 26 rejection above, discloses all claim limitations.

Regarding claim 28-29, Sheynblat, as applied to claim 26 rejection above, discloses all claim limitations (see FIG. 1).

Regarding claim 30, Sheynblat, as applied to claims 23 and 26 rejection above, discloses all claim limitations.

Regarding claim 31, Sheynblat, as applied to claims 11 and 30 rejection above, discloses all claim limitations.

Regarding claim 32-34, Sheynblat, as applied to claims 9 and 30 rejection above, discloses all claim limitations.

Regarding claim 44-45, Sheynblat, as applied to claims 26 and 35-36 rejection above, discloses all claim limitations.

Regarding claim 48, Sheynblat, as applied to claims 26 and 37 rejection above, discloses all claim limitations.

6. Claims 14, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheynblat (2005/0192024) as applied to claim 1 above, and further in view of Tzamaloukas (2004/0230345).

Regarding claims 14, 24-25, Sheynblat, as applied to claims 1, 15 rejection above, does not disclose dynamic measurement of the mobile that is effected by speed, acceleration relative to each satellite. However, Tzamaloukas disclose a position system by incorporating DGPS, micro-electro-mechanical system (inertial sensor), speed sensor. It would have been obvious to modify Sheynblat with Tzamaloukas by

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incorporating claimed features in order to further enhance the usefulness of the positioning system in a situation where both satellite and cellular system are not available.

Response to Arguments

Applicant's arguments filed (11/11/2008) have been fully considered but they are not persuasive.

Applicant argues for claims 1 and 15 that Sheynblat fails to teach or suggest any "assistance data...representing an **approximate reference time**".

Sheynblat discloses timing assistance provided by location server. It is known in the art that location server/aiding information are used to speed up the terminal operation especially in the acquisition stage by providing in view satellites, **timing** reference and other necessary navigation data. Timing and clock inaccuracy is the main cause of errors in calculating the pseudorange and hence the position which is to be found. Use of cellular network combined with SPS receiver provides accurate satellite clock which is a reference time.

Applicant also argues for claims 1 and 15 that Sheynblat fails to teach or suggest at least "a signal replica is determined for each pair of hypotheses corresponding to said estimated positions and distances and to said associated Doppler effects over a selected time interval" and selecting "the pair of hypotheses corresponding to the signal replica having a maximum correlation with the signal received during said time interval."

While Sheynblat does not specifically disclose "pair of hypotheses", it appears that the claims 1 and 15 are simply claiming **correlating** with the help of aiding

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information. It is suggested, if applicant believes a specific steps or devices are used to calculate a useful result other than simply correlating, more details should be amended.

It is noted that applicant does not separately argue for the features of other claims.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry Liu whose telephone number is 571-270-1338. The examiner can normally be reached on Monday -Thursday and every other Friday..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-270-2338.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Harry Liu
Examiner
Art Unit 3662
February 6, 2009

/Thomas H. Tarcza/

Supervisory Patent Examiner, Art Unit 3662